REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application and indicating that claims 8, 9, 13, and 14 contain allowable subject matter.

Disposition of Claims

Claims 1-20 were pending in this application. Claims 19 and 20 are canceled without prejudice or disclaimer. In addition, new claim 21 is added by this reply. After the amendments, claims 1-18 and 21 are pending in this application.

Claims 1, 10, 15, and 17-18 are independent. The remaining claims depend, directly or indirectly, from claims 1, 10, and 15.

Amendments to Claims

Claim 1 has been amended to clarify the invention recited. Support for this amendment may be found at least in paragraph [0102].

Claim 21 has been added. Support for this new claim can be found, for example, in paragraph [0062].

No new matter has been introduced by these amendments.

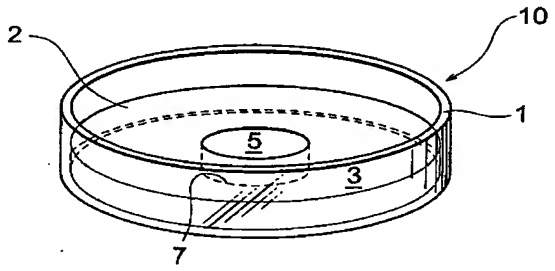
Rejection(s) under 35 U.S.C § 102

Claims 1-7, 10-12, 15, 17-20 stand rejected under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 5,955,352 (Inoue et al.). Claims 19 and 20 have been cancelled, rendering the rejection with respect to these claims moot. Claim 1 has been amended. To the extent that this rejection may still apply to the amended and original claims, this

rejection is respectfully traversed.

The present invention relates to apparatus for cell cultures, tissue culture, drug testing, etc. and methods for preparing such apparatus. An apparatus in accordance with one embodiment of the invention is exemplified in FIG. 1C.

FIG. 1C



In the particular embodiment shown in FIG. 1C, a donut-shaped member **3** is formed in a Petri dish **1** such that a hollow **5** is formed. The hollow **5** is to hold culture medium for cell culture, and the member **3** directly contacts the culture medium during use such that the culture medium in hollow **5** can exchange (by diffusion) with a solution held in member **3**. The member **3** is made of a gelatinous material (e.g., agar and the like), a sponge, or a mesh so that it can hold solutions that include nutrients, growth factors, testing chemicals, and the like (hereafter referred to as "culture medium components" for clarity of discussion). The function of member **3** is to act as a reservoir (or buffer) for the culture medium components so that a cell culture medium maintained in hollow **5** is exposed to relatively constant concentrations of the culture medium components held in member **3**. In this way, member **3** allows the cells to be cultured in a condition as if they were cultured in a large volume of culture medium without diluting the cells in a large volume. (Specification, paragraphs [0102] and [0186]).

Independent claim 1 includes a limitation, "at least one member (x) selected from

the group consisting of a gelatinous material, a sponge material, and a mesh material, wherein the member (x) . . . has at least one hollow . . . and holds a solution containing culture medium components, wherein the solution held in the member (x) can exchange with a culture medium solution placed in the at least one hollow by diffusion during use." Note that member (x) is illustrated as member **3** in the above FIG. 1C.

Independent claim 10 recites a method of preparing such an apparatus by forming the member **3** in the container (e.g., Petri dish **1**) using "*a solution that contains culture medium components and that can be gelatinized*" in a manner such that a hollow can be formed (by using an article placed in the container as a mold for the hollow).

Independent claims 15, 17, and 18 each recite a method of preparing such an apparatus by making the member **3** in the container, wherein the member is selected from a gelatinous material, a sponge material, and a mesh material, and making a hollow in this material. The member **3** includes "*a solution that contains culture medium components*."

In contrast, Inoue et al discloses a plate that can be used to perform a large number of tests each using a small amount of solution. (Col. 1, ll. 50-54; Col. 2, ll. 18-26). Microtiter plates are good for performing a large number of tests in small volumes. However, microtiter plates require an expensive machine to fill each individual well. The plates disclosed by Inoue et al. provide a cheap alternative to the microtiter plates because they do not require a special machine to fill each well. Inoue's plate has a plurality of sample-holding portions formed on the bottom face of the plate and a liquid-absorbent body capable of coming in contact with the liquid sample so that the body can absorb excess liquid sample, when the liquid sample is introduced into the container,

while retaining the sample to be held on the sample-holding portions. (Abstract).

FIG. 1

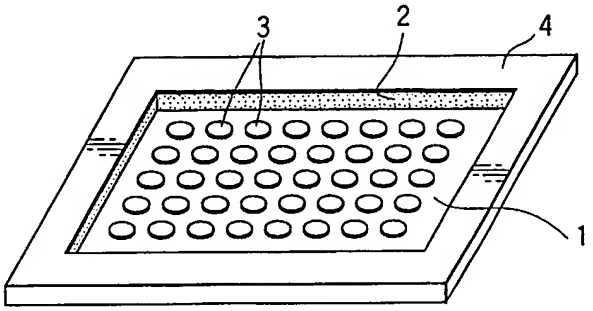


FIG. 1 exemplifies a plate of Inoue. FIGs. 2 & 3 show the same plate in different views. A plate of Inoue et al., shown in FIGs. 1-3, includes multiple sample-holding portions **3** formed on the bottom face of the container **1** and a liquid absorbent body **2** included along the sides of the container. The sample-holding portions **3** are hydrophilic portions form on the hydrophobic bottom surface. When a liquid sample is injected into the plate, the liquid will initially cover all bottom surface of the container. The absorbent body **2** then absorbs the excess liquid from the hydrophobic regions. As a result, liquid sample only remains in the hydrophilic, sample-holding regions **3**. (Col. 5, ll. 52-63). This provides a quick and cheap way to introduce a large number of small-volume samples into one plate. Thus, such a plate is a cheap alternative to a conventional microtier plate. However, the sample holding portion **3** does not have a hollow. In addition, a culture medium added to sample-holding portions **3** cannot exchange with the excess liquid soaked up by the absorbent body **2** during use.

Other variations of the plates disclosed in Inoue et al. include that shown in FIGs. 4 & 5, in which the sample-holding portion **3** comprises two regions: a reagent-containing region **12** surrounded by a sample-absorbing region **11**. (Col. 10, ll. 31-35).

Addition of a sample causes expansion of the water-absorbing gel present in the sample-absorbing region, whose cross-sectional view is shown in FIG. 6. (Col. 10, ll. 47-49). Again, a solution in the sample-holding portions **3** cannot exchange with the excess liquid soaked up by the absorbent body **2** during use.

Alternative embodiments illustrated in FIGs. 18-21 in Inoue et al. have the absorbent body **2** attached to a cap. The absorbent body **2** is not "placed within the concave part of the container," as required by claims 1, 10, 15, and 17-18. Instead, the liquid-absorbent body **2** comes in contact with the liquid sample only when the cap is fitted to the sample container to absorb the excess sample other than the sample to be retained in the sample-holding portions. (Col. 16, ll. 36-42). This is further illustrated in Example 6: "the excess of the broth other than that to be retained in the concave portions on the sample-holding portions was *completely absorbed* by the liquid-absorbent body. Thereafter, the cap body is removed." (Example 6, Col. 22, ll. 2-5). Again, the absorbent body **2** is used to absorb excess liquid, not to form a side wall of a well for holding a culture medium during use. Therefore, the sample solution in the sample-holding portions **3** cannot exchange with the excess liquid soaked up by the absorbent body **2** during use.

With regard to methods for manufacturing the plates, Inoue et al. does not teach or suggest making a member (x) that includes "*a solution that contains culture medium components*," as required by claims 10, 15, and 17. The absorbent body **2** of Inoue's plate is dry so that it can soak up excess liquids during use.

To anticipate, a prior art reference must disclose each and every limitation of a claim. In view of the above, Inoue et al. fails to show or suggest the present invention as

recited in the independent claims 1, 10, 15, and 17-18. Thus, the independent claims 1, 10, 15, and 17-18 are patentable over Inoue et al. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Allowable Subject Matter

Claims 8, 9, 13 and 14 have been indicated to include allowable subject matter and would be allowable if re-written in independent form. For reasons set forth above, Applicant believes the independent claims, from which claims 8, 9, 13, and 14 depend, are patentable. Therefore, Applicant respectfully defers re-writing these claims in independent form.

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 16422.005001).

Respectfully submitted,

Date: 4/8/05

T. Chyau Liang, Reg. No. 48,885
OSHA & MAY L.L.P.
One Houston Center, Suite 2800
1221 McKinney Street
Houston, TX 77010
Telephone: (713) 228-8600
Facsimile: (713) 228-8778

95978_1.DOC